

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A dielectric barrier discharge excimer light source, comprising:
an anode having a dielectric body and an anode electrode covered with said dielectric body and composed of a straight elongated hollow cylindrical body; and
an elongated cathode surrounding said anode, said cathode comprising a straight semicylindrical body and a cathode wire group composed of a plurality of wires fixed parallel to each other to said semicylindrical body,
wherein said anode and said cathode are disposed parallel to each other in the longitudinal direction, and
wherein said cathode has formed on the surface of said cathode at the side facing said anode a reflective surface for reflecting the radiation in a vacuum ultraviolet spectral region.
2. (Original) The dielectric barrier discharge excimer light source according to claim 1,
wherein a plurality of said wires constituting said cathode wire group are stretched between the two ends of said straight semicylindrical body extending along the longitudinal direction thereof;
wherein the diameter of a plurality of said wires constituting said cathode wire group does not exceed 2 mm; and
wherein the angle formed by the longitudinal direction of said straight semicylindrical body and the longitudinal direction of said wires is set to a right angle or to an angle within a range such that an angle shift from the perpendicular position does not exceed 15°.
3. (Original) A dielectric barrier discharge excimer light source, comprising:
an anode having a dielectric body and an anode electrode covered with said dielectric body and composed of a straight elongated hollow cylindrical body; and

an elongated cathode surrounding said anode, said cathode comprising a straight semitubular body composed of three surfaces and having a U-shaped cross section perpendicular to the longitudinal direction and a cathode wire group composed of a plurality of wires fixed parallel to each other to said semitubular body,

wherein said anode and said cathode are disposed parallel to each other in the longitudinal direction, and

wherein said cathode has formed on the surface of said cathode at the side facing said anode a reflective surface for reflecting the radiation in a vacuum ultraviolet spectral region.

4. (Original) The dielectric barrier discharge excimer light source according to claim 3, wherein a plurality of said wires constituting said cathode wire group are stretched between the two ends of said straight semitubular body extending along the longitudinal direction thereof; wherein the diameter of a plurality of said wires constituting said cathode wire group does not exceed 2 mm; and

wherein the angle formed by the longitudinal direction of said straight semitubular body and the longitudinal direction of said wires is set to a right angle or to an angle within a range such that an angle shift from the perpendicular position does not exceed 15°.

5. (Original) A dielectric barrier discharge excimer light source, comprising:
an anode having a dielectric body and an anode electrode covered with said dielectric body and composed of an elongated hollow tubular body composed of four surfaces and having a rectangular cross section perpendicular to the longitudinal direction; and
an elongated cathode surrounding said anode, said cathode comprising a straight semitubular body composed of three surfaces and having a U-shaped cross section perpendicular to the longitudinal direction and a cathode wire group composed of a plurality of wires fixed parallel to each other to said semitubular body,
wherein said anode and said cathode are disposed parallel to each other in the longitudinal direction, and

wherein said cathode has formed on the surface of said cathode at the side facing said anode a reflective surface for reflecting the radiation in a vacuum ultraviolet spectral region.

6 (Original) The dielectric barrier discharge excimer light source according to claim 5, wherein a plurality of said wires constituting said cathode wire group are stretched between the two ends of said straight semitubular body extending along the longitudinal direction thereof; wherein the diameter of a plurality of said wires constituting said cathode wire group does not exceed 2 mm; and

wherein the angle formed by the longitudinal direction of said straight semitubular body and the longitudinal direction of said wires is set to a right angle or to an angle within a range such that an angle shift from the perpendicular position does not exceed 15°.

Claims 7-33 (Canceled)

33. (Previously presented) The dielectric barrier discharge excimer light source according to claim 1, wherein said anode electrode has a semicylindrical shape, the convex surface of said semicylindrical shape being disposed in the direction where said cathode wire group is disposed, and the ends along the longitudinal direction of said semicylindrical shape having the shape rounded toward the inside of said semicylindrical shape.

34. (Previously presented) The dielectric barrier discharge excimer light source according to claim 2, wherein said anode electrode has a semicylindrical shape, the convex surface of said semicylindrical shape being disposed in the direction where said cathode wire group is disposed, and the ends along the longitudinal direction of said semicylindrical shape having the shape rounded toward the inside of said semicylindrical shape.

35. (Previously presented) The dielectric barrier discharge excimer light source according to claim 3, wherein said anode electrode has a semicylindrical shape, the convex surface of said semicylindrical shape being disposed in the direction where said cathode wire group is disposed,

and the ends along the longitudinal direction of said semicylindrical shape having the shape rounded toward the inside of said semicylindrical shape.

36. (Previously presented) The dielectric barrier discharge excimer light source according to claim 4, wherein said anode electrode has a semicylindrical shape, the convex surface of said semicylindrical shape being disposed in the direction where said cathode wire group is disposed, and the ends along the longitudinal direction of said semicylindrical shape having the shape rounded toward the inside of said semicylindrical shape.

Claims 37-42 (Canceled)

43. (Previously presented) The dielectric barrier discharge excimer light source according to claim 5, wherein said anode electrode has a semitubular rectangular shape, the bottom surface of said semitubular rectangular shape being disposed in the direction where said cathode wire group is disposed, and the ends along the longitudinal direction of said semitubular rectangular shape having the shape rounded toward the inside of said rectangular shape.

44. (Previously presented) The dielectric barrier discharge excimer light source according to claim 6, wherein said anode electrode has a semitubular rectangular shape, the bottom surface of said semitubular rectangular shape being disposed in the direction where said cathode wire group is disposed, and the ends along the longitudinal direction of said semitubular rectangular shape having the shape rounded toward the inside of said rectangular shape.

Claims 45-132 (Canceled)